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### Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

1. (Currently amended) A ~~storage unit~~disk array system connected communicably to a plurality of other ~~storage units~~ disk array systems each having a plurality of first hard disk drives on which data is stored, wherein each of said plurality of other disk array systems is arranged to receive and store data from a different respective information processing unit in response to commands received therefrom, each said information processing unit writing and reading said data to and from said corresponding one of said plurality of other disk array systems, said ~~storage unit~~disk array system comprising:

a plurality of second hard disk drives on which data is ~~stored;~~stored; and

a second storage controller including:

a first receiving unit that receives copies of first storage data and first identifiers from respective first storage controllers of said other ~~storage units~~disk array systems, said first storage data being stored in a plurality of storage blocks created by logically partitioning a data storage area of said plurality of first hard disk drives, said first identifiers identifying the storage blocks;

a first operation controller that calculates an exclusive OR of the copies of the first storage data, with a correspondence established among the first identifiers, from the copies of the first storage data received by said first receiving unit from said other

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~~storage units~~disk array system; and

a first ~~storage~~disk controller that stores a calculation result of the exclusive

OR, calculated by said first operation controller, into storage blocks of said second

hard disk drives, said storage blocks of said second hard disk drives having second

identifiers corresponding to the first identifiers, said second identifiers individually

identifying a plurality of storage blocks created by logically partitioning a data storage

area of said plurality of second hard disk drives.


2. (Currently amended)  The ~~storage unit~~disk array system according to claim

1, wherein all calculation results of the exclusive OR calculated by said first

operation controller are stored on said second hard disk drives, said ~~storage unit~~disk

array system further comprising:

a second receiving unit that receives a calculation result of an exclusive OR

between write data and the first storage data, as well as the first identifier that

identifies the storage block in which the write data is to be written, from one of said

other ~~storage unit~~disk array systems, said calculation result being calculated by said

other ~~storage unit~~disk array system that receives the write data to said first hard disk

drives from an information processing unit, said first storage data being stored in the

storage block of said first hard disk drives in which the write data is to be written;

a second operation controller that calculates an exclusive OR between the

calculation result received by said second receiving unit and second storage data

stored in the storage block of said second hard disk drives identified by the second

identifier corresponding to the first identifier received by said second receiving unit;

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and

a second ~~storage~~ disk controller that stores a calculation result of the

exclusive OR, calculated by said second operation controller, into the storage block

of said second hard disk drives identified by the second identifier.


3. (Currently amended)  The disk array system ~~storage unit~~ according to claim

1, wherein all calculation results of the exclusive OR calculated by said first

operation controller are stored on said second hard disk drives, said disk array

system ~~storage unit~~ further comprising, when said other communicably connected

disk array system ~~storage unit~~ is added:

a third receiving unit that receives a copy of the first storage data and the first

identifiers from said added other disk array system ~~storage unit~~, said first storage

data being stored in the storage blocks of said first hard disk drives of said added

other disk array system ~~storage unit~~;

a third operation controller that calculates an exclusive OR between the copy

of said first storage data received by said third receiving unit and second storage

data stored in the storage blocks of said second hard disk drives identified by the

second identifiers corresponding to the first identifiers received by said third

receiving unit; and

a third ~~storage~~ disk controller that stores a calculation result of the exclusive

OR, calculated by said third operation controller, into the storage blocks of said

second hard disk drives identified by the second identifiers.


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4. (Currently amended) The <u>disk array system</u> storage unit according to claim

1, wherein all calculation results of the exclusive OR calculated by said first

operation controller are stored on said second hard disk drives, said <u>disk array</u>

<u>system</u> storage unit further comprising, when said other communicably connected

<u>disk array system</u> storage unit is added:

a fourth receiving unit that receives a calculation result of an exclusive OR

between write data and the first storage data as well as the first identifier, which

identifies the storage block into which the write data is to be written, from said added

other <u>disk array system</u>storage unit, said calculation result being calculated by said

added other <u>disk array system</u> storage unit that receives the write data to said first

hard disk drives of said added other storage from an information processing unit,

said first storage data being stored in the storage block of said first hard disk drives

in which the write data is to be written;

a fourth operation controller that calculates an exclusive OR between the

calculation result received by said fourth receiving unit and second storage data

stored in the storage block of said second hard disk drives identified by the second

identifier corresponding to the first identifier received by said fourth receiving unit;

and

a fourth storage <u>disk</u> controller that stores a calculation result of the exclusive

OR, calculated by said fourth operation controller, into the storage block of said

second hard disk drives identified by the second identifier.

5. (Currently amended) The <u>disk array system</u> storage unit according to claim

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1, wherein all calculation results of the exclusive OR calculated by said first operation controller are stored on said second hard disk drives, said disk array system storage unit further comprising:

a fifth receiving unit that receives, from one of said other disk array systemstorage units, a request to send the first storage data to be stored in said first hard disk drives of said one of said other disk array systemsstorage units;

a first sending unit that sends a request to send a copy of the first storage data, which is stored in the storage blocks of said first hard disk drives, as well as the first identifiers that identify the storage blocks in which the first storage data is stored, to said other disk array systems storage units other than said one of said other disk array systemsstorage units;

a sixth receiving unit that receives the copy of the first storage data as well as the first identifiers from each of the other disk array systems storage units other than said one of said other disk array systemsstorage units;

a fifth operation controller that calculates an exclusive OR between copies of the first storage data and second storage data, said copies of the first storage data being the copies of the first storage data received by said sixth receiving unit from said other disk array systems storage units other than said one of other disk array systems storage units and corresponding to the first identifiers, said second storage data being stored in the storage blocks of said second hard disk drives identified by the second identifiers corresponding to the first identifiers received by said sixth receiving unit; and

a second sending unit that sends a calculation result of the exclusive OR

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calculated by said fifth operation controller, as well as the first identifiers, to said one

of said other ~~disk array system~~storage unit.

6. (Currently amended) A method of controlling a disk array system ~~storage unit~~ connected communicably to a plurality of other disk array systems ~~storage units~~

each having a plurality of first hard disk drives on which data is stored and having a

plurality of second hard disk drives on which data is stored, wherein each of said

plurality of other disk array systems is arranged to receive and store data from a

different respective information processing unit in response to commands received

therefrom, each said information processing unit writing and reading said data to and

from said corresponding one of said plurality of other disk array systems, said

method comprising the steps of:

receiving, in a second storage controller of said disk array system, copies of

first storage data and first identifiers from a first storage controller of each of said

other disk array systems ~~storage units~~, respectively, said first storage data being

stored in a plurality of storage blocks created by logically partitioning a data storage

area of said plurality of first hard disk drives, said first identifiers identifying the

storage blocks;

calculating, in said second storage controller, an exclusive OR of the copies of

the first storage data, with a correspondence established among the first identifiers,

from the copies of the first storage data received from said other disk array

systems ~~storage units~~; and

storing, by said second storage controller, a calculation result of the exclusive

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OR into storage blocks of said second hard disk drives, said storage blocks of said

second hard disk drives having second identifiers corresponding to the first

identifiers, said second identifiers individually identifying a plurality of storage blocks

created by logically partitioning a data storage area of said plurality of second hard

disk drives.


7. (Currently amended)  The method of controlling a <u>disk array system</u>
storage unit-according to claim 6, wherein all calculation results of the exclusive OR

are stored on said second hard disk drives, said method further comprising the steps

of:

receiving a calculation result of an exclusive OR between write data and the

first storage data, as well as the first identifier that identifies the storage block in

which the write data is to be written, from <u>one of</u> said other <u>disk array system</u>storage

unit, said calculation result being calculated by said other <u>disk array system</u> storage

unit-that receives the write data to said first hard disk drives from an information

processing unit, said first storage data being stored in the storage block of said first

hard disk drives in which the write data is to be written;

calculating an exclusive OR between the calculation result and second

storage data stored in the storage block of said second hard disk drives identified by

the second identifier corresponding to the first identifier; and

storing a calculation result of the exclusive OR into the storage block of said

second hard disk drives identified by the second identifier.


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8. (Currently amended) The method of controlling a <u>disk array system</u> ~~storage unit~~ according to claim 6, wherein all calculation results of the exclusive OR are stored on said second hard disk drives, said method further comprising the steps of, when said other communicably connected <u>disk array system</u> ~~storage unit~~ is added:

receiving a copy of the first storage data and the first identifiers from said added other <u>disk array system</u>~~storage unit~~, said first storage data being stored in the storage blocks of said first hard disk drives of said added other <u>disk array</u> <u>system</u>~~storage unit~~;

calculating an exclusive OR between the copy of said first storage data and second storage data stored in the storage blocks of said second hard disk drives identified by the second identifiers corresponding to the first identifiers; and

storing a calculation result of the exclusive OR into the storage blocks of said second hard disk drives identified by the second identifiers.


9. (Currently amended) The method of controlling a <u>disk array system</u> ~~storage unit~~ according to claim 6, wherein all calculation results of the exclusive OR are stored on said second hard disk drives, said method further comprising the steps of, when said other communicably connected <u>disk array system</u> ~~storage unit~~ is added:

receiving a calculation result of an exclusive OR between write data and the first storage data as well as the first identifier, which identifies the storage block into which the write data is to be written, from said added other <u>disk array system</u>~~storage~~

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~~unit~~, said calculation result being calculated by said added other <u>disk array</u>

<u>system</u>~~storage unit~~ that receives the write data to said first hard disk drives of said

added other storage from an information processing unit, said first storage data

being stored in the storage block of said first hard disk drives in which the write data

is to be written;

calculating an exclusive OR between the calculation result and second

storage data stored in the storage block of said second hard disk drives identified by

the second identifier corresponding to the first identifier; and

storing a calculation result of the exclusive OR into the storage block of said

second hard disk drives identified by the second identifier.


10. (Currently amended) The method of controlling a <u>disk array system</u>

~~storage unit~~ according to claim 6, wherein all calculation results of the exclusive OR

are stored on said second hard disk drives, said method further comprising the steps

of:

receiving, from one of said other <u>disk array systems</u>~~storage units~~, a request to

send the first storage data to be stored in said first hard disk drives of said one of

said other <u>disk array systems</u>~~storage units~~;

sending a request to send a copy of the first storage data, which is stored in

the storage blocks of said first hard disk drives, as well as the first Identifiers that

identify the storage blocks in which the first storage data is stored, to said other <u>disk</u>

<u>array systems</u> ~~storage units~~ other than said one of said other storage units;

receiving the copy of the first storage data as well as the first identifiers from

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each of the other <u>disk array systems</u> ~~storage units~~ other than said one of said other

~~disk array systems~~<u>storage units</u>;

calculating an exclusive OR between copies of the first storage data and

second storage data, said copies of the first storage data being the copies of the first

storage data from said other <u>disk array systems</u> ~~storage units~~ other than said one of

other <u>disk array systems</u> ~~storage units~~ and corresponding to the first identifiers, said

second storage data being stored in the storage blocks of said second hard disk

drives identified by the second identifiers corresponding to the first identifiers; and

sending a calculation result of the exclusive OR as well as the first identifiers

to said one of said other <u>disk array system</u>~~storage unit~~.


11. (Currently amended)  A ~~storage system~~<u>disk array system</u> comprising a

plurality of first ~~storage units~~<u>disk array system</u> each having <u>a first storage controller</u>

<u>and</u> a plurality of first hard disk drives on which data is stored; and a second ~~storage~~

~~unit~~<u>disk array system</u> connected communicably to the first ~~storage units~~<u>disk array</u>

<u>system</u> and having <u>a second storage controller and</u> a plurality of second hard disk

drives on which data is stored,<u> wherein each of said first disk array systems is</u>

<u>arranged to receive and store data from a different respective information processing</u>

<u>unit in response to commands received therefrom, each said information processing</u>

<u>unit writing and reading said data to and from said corresponding disk array system,</u>

wherein <u>in each of</u> said first ~~storage unit~~<u>disk array systems</u>~~comprises~~:

~~a first data sending unit that~~<u>said first storage controller</u> sends a copy of first

storage data and first identifiers to said second ~~storage unit~~<u>disk array system</u>, said

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first storage data being stored in a plurality of storage blocks created by logically

partitioning a data storage area of said plurality of first hard disk drives, said first

identifiers identifying the storage blocks,blocks, and

wherein in said second storage unitdisk array system, said second storage

controller comprises:

a first data receiving unit that receives copies of the first storage data and the

first identifiers from said first storage unitsdisk array systems;

a first data operation controller that calculates an exclusive OR of the copies

of the first storage data, with a correspondence established among the first

identifiers, from the copies of the first storage data received by said first receiving

unit from said first storage unitsdisk array systems; and

a first data storage disk controller that stores a calculation result of the

exclusive OR, calculated by said first data operation controller, into storage blocks of

said second hard disk drives, said storage blocks of said second hard disk drives

having second identifiers corresponding to the first identifiers, said second identifiers

individually identifying a plurality of storage blocks created by logically partitioning a

data storage area of said plurality of second hard disk drives.

12. (Currently amended) The storage systemdisk array system according to

claim 11claim 11, wherein all calculation results of the exclusive OR calculated by

said first data operation controller are stored on said second hard disk drives,

wherein each of said first storage unitdisk array systems further comprises:

a second data operation controller that, when write data to said first hard disk

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drives is received from an information processing unit, calculates an exclusive OR

between the write data and the first storage data stored in the storage block of said

first hard disk drives into which the write data is to be written; and

a second data sending unit that sends a calculation result of the exclusive OR

calculated by said second data operation controller, as well as said first identifier that

identifies the storage block into which the write data is to be written, to said second

~~storage unit~~disk array systems, and

said second ~~storage unit~~disk array system comprises:

a second data receiving unit that receives a calculation result of the exclusive

OR, calculated by said second data operation controller, as well as the first identifier,

from said first ~~storage unit~~disk array system;

a third data operation controller that calculates an exclusive OR between the

calculation result received by said second data receiving unit and second storage

data stored in the storage block of said second hard disk drives identified by the

second identifier corresponding to the first identifier received by said second data

receiving unit; and

a second ~~data storage~~ disk controller that stores a calculation result of the

exclusive OR, calculated by said third data operation controller, into the storage

block of said second hard disk drives identified by the second identifier.


13. (Currently amended) The ~~storage system~~disk array system according to

claim 11, wherein all calculation results of the exclusive OR calculated by said first

data operation controller are stored on said second hard disk drives,

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wherein said second ~~storage unit~~disk array system further comprises:

a third data sending unit that, when said first ~~storage unit~~disk array system connected communicably to said second ~~storage unit~~disk array system is added, sends a request to send a copy of the first storage data stored in the storage blocks of said first hard disk drives, as well as the first identifiers that identify the storage blocks in which the first storage data is stored, to said added first ~~storage unit~~disk array system,

said first ~~storage unit~~disk array system further comprises:

a fourth data sending unit that, in response to the request to send, sends the copy of the first storage data stored in the storage blocks of said first hard disk drives, as well as the first identifiers, to said second ~~storage unit~~disk array system,

said second ~~storage unit~~disk array system further comprises:

a third data receiving unit that receives the copy of the first storage data, as well as the first identifiers, from said first ~~storage unit~~disk array system;

a fourth data operation controller that calculates an exclusive OR between the copy of the first storage data received by said third data receiving unit and second storage data stored in the storage blocks of said second hard disk drives identified by the second identifiers corresponding to the first identifiers received by said third data receiving unit; and

a third ~~data storage~~disk controller that stores a calculation result of the exclusive OR calculated by said fourth data operation controller into the storage blocks of said second hard disk drives identified by said second identifiers.

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14. (Currently amended) The ~~storage system~~disk array system according to claim 11, wherein all calculation results of the exclusive OR calculated by said first data operation controller are stored on said second hard disk drives,

wherein, when said first ~~storage unit~~disk array system connected communicably to said second ~~storage unit~~disk array system is added, said added first ~~storage unit~~disk array system further comprises:

a fifth data operation controller that, when write data to said first hard disk drives is received from an information processing unit, calculates an exclusive OR between the write data and the first storage data stored in the storage block of said first hard disk drives into which the write data is to be written; and

a fifth data sending unit that sends a calculation result of the exclusive OR calculated by said fifth data operation controller, as well as the first identifier identifying the storage block into which the write data is to be written, to said second ~~storage unit~~disk array system, and

said second ~~storage unit~~disk array system further comprises:

a fourth data receiving unit that receives a calculation result of the exclusive OR calculated by said fifth data operation controller, as well as the first identifier, from said added first ~~storage unit~~dist array system;

a sixth data operation controller that calculates an exclusive OR between the calculation result received by said fourth data receiving unit and second storage data stored in the storage block of said second hard disk drives identified by said second identifier corresponding to the first identifier received by said fourth data receiving unit; and

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a fourth ~~data storage~~ disk controller that stores a calculation result of the

exclusive OR calculated by said sixth data operation controller into the storage block

of said second hard disk drives identified by said second identifier.


15. (Currently amended) The ~~storage system~~ disk array system according to

claim 11, wherein all calculation results of the exclusive OR calculated by said first

data operation controller are stored on said second hard disk drives,

wherein each of said first ~~storage unit~~ disk array systems further comprises:

a sixth data sending unit that sends a request to send the first storage data to

be stored in said first hard disk drives of said first ~~storage unit~~ disk array system to

said second ~~storage unit~~ disk array system,

said second ~~storage unit~~ disk array system further comprises:

a fifth data receiving unit that receives the request to send the first storage

data from said first ~~storage unit~~ disk array system;

a seventh data sending unit that, in response to the request to send the first

storage data, sends a request to send a copy of the first storage data, which is

stored in the storage blocks of said first hard disk drives, as well as the first

identifiers that identify the storage blocks in which the first storage data is stored, to

said first ~~storage units~~ disk array system other than said first ~~storage unit~~ disk array

system that has sent the request to send said first storage data;

a sixth data receiving unit that receives the copy of the first storage data, as

well as the first identifiers, from each of said first ~~storage units~~ disk array system

other than said first ~~storage unit~~ disk array system that has sent the request to send

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the first storage data;

a seventh data operation controller that calculates an exclusive OR between copies of the first storage data and second storage data, said copies of the first storage data being the copies of the first storage data received by said sixth data receiving unit and corresponding to the first identifiers, said second storage data being stored in the storage blocks of said second hard disk drives identified by the second identifiers corresponding to the first identifiers received by said sixth receiving unit; and

an eighth data sending unit that sends a calculation result of the exclusive OR calculated by said seventh data operation controller, as well as the first identifiers, to said first ~~storage unit~~disk array system that has sent the request to send the first storage data, and,

said first ~~storage unit~~disk array system further comprises:

a seventh data receiving unit that receives a calculation result of the exclusive OR calculated by said seventh data operation controller, as well as the first identifiers, from said second ~~storage unit~~disk array system; and

a fifth ~~data storage~~disk controller that stores the calculation result of the exclusive OR, received by said seventh data receiving unit, into the storage blocks of said first hard disk drives identified by the first identifiers received by said seventh data receiving unit.

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